WHAT IS CLAIMED IS:

1.   A motion picture data converter comprising:

an MPEG-2 decoding unit which decodes motion picture data in an MPEG-2 format into motion picture data in a

5   non-compressed format;

a motion vector extraction unit which extracts motion vector information from the motion picture data being decoded in said MPEG-2 decoding unit;

a motion compensation unit which generates the motion

10   vector information in the MPEG-4 format, by causing the extracted motion vector information to be reflected in the motion compensation processing for the MPEG-4 format, and executes the motion compensation processing, using the generated motion vector information; and

15   an MPEG-4 encoding unit which encodes motion picture data in the MPEG-4 format, using the motion compensation processed data output from said motion compensation unit and the motion picture data in the non-compressed format decoded in said MPEG-2 decoding unit.

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2.   The motion picture data converter according to claim 1, wherein said MPEG-4 encoding unit generates and outputs locally decoded motion picture data used in the motion compensation processing in said motion compensation unit,

25   said motion picture data converter further comprises

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a display unit which simultaneously displays the locally
decoded motion picture data output from said MPEG-4 encoding
unit and the motion picture data in the non-compressed format
decoded in said MPEG-2 decoding unit.

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3.   The motion picture data converter according to claim
1, further comprising a data multiplexing unit which
multiplexes and outputs the motion picture data in the MPEG-2
format and the motion picture data in the MPEG-4 format output
10   from said MPEG-4 encoding unit.

4.   A computer program for making a computer convert motion
picture data in an MPEG-2 format to motion picture data in
an MPEG-4 format, the computer program making the computer
15   execute the steps of:

decoding motion picture data in an MPEG-2 format into
motion picture data in a non-compressed format;

extracting motion vector information from the motion
picture data being decoded;

20   generating the motion vector information in the MPEG-4
format, by causing the extracted motion vector information
to be reflected in the motion compensation processing for
the MPEG-4 format;

performing motion compensation processing using the
25   generated motion vector information; and

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encoding motion picture data in the MPEG-4 format, using the motion compensation processed data and the motion picture data in the non-compressed format.

5   5.   The computer program according to claim 4, wherein in the encoding step, locally decoded motion picture data used in the motion compensation processing are generated and output,

wherein the computer program further making the computer simultaneously display the locally decoded motion picture data and the motion picture data in the non-compressed format.

6.   The computer program according to claim 4, further making the computer multiplex and output the motion picture data in the MPEG-2 format and the motion picture data in the MPEG-4 format output in the encoding step.